The Effectiveness of TB & HIV Collaboration Programme at Wellness Centre, Kimberley

by

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Declaration

By submitting this assignment electronically, I declare that the entirety of the work contained therein is my own, original work, that I am the owner of the copyright thereof (unless to the explicitly otherwise stated) and that I have not previously in its entirety or in part submitted it for obtaining any qualification.

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Summary

This study sought to determine the effectiveness of a TB/HIV collaboration programme in an infectious disease clinic in Frances Baard District, Kimberley, and assess the underlying challenges that clients face while accessing TB and HIV treatment, care and support services from the health care facility.

South Africa is facing one of the worst dual epidemics of TB and HIV in the world. It is also described as one of the countries with the highest TB burden in the world. HIV has been shown to fuel the TB epidemic by promoting progression to active disease, both in people with recently acquired and latent disease. Given that a large proportion of TB patients are HIV infected and experience considerable morbidity and mortality, integration of both services at the same service point becomes unavoidable.

Data was collection through focus group discussions and self-administered questionnaires. It was clear that TB/HIV programme collaboration has not been optimized. Clients travel from one service point to another to access TB and HIV care. Service delivery sometimes is delayed due to several factors and therefore clients miss the appointments at the other service point. This has led to adherence challenge, treatment default, treatment failure and increasing burden of TB/HIV disease. The research determined that the key to optimize TB/HIV collaboration is to provide both services from the same service point as well as to improve the level of care to the clients. Shared responsibility should be encouraged among service providers/caregivers and clients in an infectious disease unit. Timely interventions to clients will reduce the morbidity rates associated with TB/HIV co-infection and more deaths will be averted especially if full integration is implemented. It is increasingly evident that TB and HIV programmes must collaborate fully to counteract the impact of HIV on TB.

Opsomming

Die doel van die studie was om die effektiwiteit van ‘n MIV/TB samewerkingsprogram in ‘n kliniek in Frances Baard distrik in Kimberley te ondersoek en ook om die onderliggende struikelblokke te bepaal wat pasiënte ondervind wanneer hul vir MIV en TB behandeling na die gesondheidsorg fasilieteit kom.

Suid-Afrika word erg geraak deur die gesamentlike epidemie van TB en Vigs. Dit is ook een van die lande met die hoogste TB syfers ter wêreld. MIV infeksie is veel erger onder persone wat reeds TB het. Gegewe dat baie TB pasiënte MIV positief is, is integrasie van beide gesondheidsfunksies onvermydelik.

Data is ingesamel deur middel van fokusgroepbesprekings en vraelyste. Dit was duidelik dat TB/MIV programme se samewerking nie optimaal was nie. Pasiënte moet na verskillende punte gaan vir TB en MIV behandeling. Dienslewering word soms vertraag op die een punt en het die gevolg dat die pasiënte sy/haar afspraak by die volgende plek mis. Die navorsing het bevind dat dit beter sal wees om TB sowel as MIV behandeling op een punt te bied. Gedeelde verantwoordelikheid is nodig tussen die gesondheidsdienste en afsetpunte. Vroegtydige behandeling van pasiënte sal TB/MIV sterftes verlaag. Dit is dus duidelik dat TB en MIV programme gesamentlik aangebied moet word om die impak van die twee siektes teen te werk.

List of Abbreviations

TB	Tuberculosis
HIV	Human immune deficiency virus
AIDS	Acquired Immune Deficiency Syndrome
WHO	World Health Organization
PLWHA	People living with HIV/AIDS
HBC	Home based care
DOTS	The brand name of the internationally recommended tuberculosis Control strategy
ART	Anti-retroviral treatment
VCT	Voluntary Counselling and Testing
UNAIDS	The joint United Nations Programme on HIV/AIDS
NSP	National strategic plan

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Chapter 1: Introduction

1.1 Problem Statement

South African health care workers, along with those in other developing countries, are witnessing the disastrous intersection of the HIV and tuberculosis (TB) epidemics. There is a clear and strong epidemiological overlapping between TB and HIV. Worldwide, TB remains the most common co-infection in subjects living with HIV/AIDS. Over two-thirds of the 15million cases of dual-HIV/TB co-morbidity infection reported reside in Sub-Saharan Africa.

However, as HIV/AIDS expands in some of this region, such as in Southern African, the interaction between these two pathogens will continue to expand and compound the burdens related to both infections. Efforts to tackle TB and HIV have been largely separate for many years despite the overlapping epidemics, and the increasing call to fully integrate both programmes. Out of those 33 million people living with HIV/AIDS (PLWHA) estimated in 2007, barely 20% knew their HIV status, around 2% (or 630000) were screened for TB and only 29000 were put on isoniazid preventive therapy. It is clear that adequate measures to control TB infection are still not implemented in most primary health care facilities.

The World Health Organization (WHO) estimates that currently the incidence of TB in South Africa is 536 cases/ 100 000 annually and that 61% of patients diagnosed with TB are HIV-infected. TB is the commonest HIV-associated opportunistic infection and one of the leading causes of AIDS-related death. Over two-thirds of the 15 million cases of dual-HIV/TB co-morbidity infection reported reside in Sub-Saharan Africa.

The impact of HIV/AIDS is felt everywhere around the world. This is clearly outlined by Van Niekerk A.A and Kopelman L.M. They outline that at the end of 2004 there was an estimated of 39,4 million people living with the virus. Of these, 4.9 million people were infected in 2004 and estimated 3.1 million people died of the disease in the past year (Van Niekerk AA, Kopelman L.M; 2005).

Untreated HIV infection leads to progressive immunodeficiency and increased susceptibility to infections, including tuberculosis. TB in populations with high HIV prevalence is a leading cause of morbidity and mortality.

Unlike TB in HIV-uninfected patients, which is usually an indolent condition developing over months; HIV-associated TB is aggressive and can render immune-compromised patients moribund within weeks.

In 2005, the WHO Regional Committee for Africa declared TB an emergency in Africa, explicitly linking the rise in TB cases and mortality in Africa to HIV/AIDS, poverty, and weak health systems (WHO 2005). Studies done in parts of southern African countries have shown that a large proportion of patients attending health care facilities have a history of treated TB, active TB or develop TB while on Anti-retroviral drugs. TB has therefore emerged as a key clinical problem within these centers. International donor agencies have encouraged national and provincial TB and HIV programmes to engage in TB/HIV collaborative activities. This will also provide the opportunity to further examine how integrated approaches to delivering health services, as opposed to isolated vertical approaches, may or may not improve health outcomes and contribute to the universal access to primary health care.

As a result of the foregoing, the World Health Organization global strategic framework to control HIV/TB represented a co-coordinated response to the joint epidemics of these co-morbidity illnesses. Interventions aimed at counteracting the impact of TB on HIV should be reviewed in view of existing MDR-T B, XDR-TB and faster progression to acquired immune deficiency syndrome.

Background

"The microbe is nothing; the terrain is everything"

(Pasteur, quoted in Farmer 2001. P.37)

As highlighted by Louis Pasteur, any advances made in understanding the mycobacterium tuberculosis are limited unless more is also understood about the "terrain" or wider context of

TB. TB disease remains one of South Africa's biggest public health problems. On the other hand, HIV is one of the greatest challenges facing South Africa and 5,7 million people live with the disease in the country.

Some two decades since the introduction of this disease in the general population, the epidemiological situation is characterized by very large numbers of people living with HIV and a disproportionate effect on particular sectors of society, viz: young women, the poor, as well as those living in underdeveloped areas in the country. HIV, however, affects the lives of all people who live in South Africa in different ways.

The Dual epidemics – TB and HIV

HIV has profoundly changed the epidemiology of TB, disrupting the balance between TB infection and control in both developing and developed countries. HIV-associated TB is threatening to produce a public health crisis in developing countries.

In countries with high HIV prevalence, TB has re-emerged as an epidemic. There has been increased association between TB and HIV as co-morbid illnesses, an association which has an enormous negative impact on both control and spread of the co-morbid illness.

In South Africa, about 70% of TB patients are living with HIV. It is one of the conundrums of our time that TB disease is difficult to diagnose, but curable whereas HIV is very easy to diagnose yet not curable. TB is harder to diagnose in people living with HIV/AIDS (PLWHA). TB is more likely to be disseminated in the body of someone living with HIV and most PLWHA have sputum negative TB.

Background of the study

The National Department of Health in South Africa has increasingly witnessed the rapid growth of human immunodeficiency virus (HIV) epidemic within the country which has resulted in the estimated number of new tuberculosis (TB) cases. WHO estimated 1% of South African population (490,000.) gets TB annually and co-infection with TB and HIV/AIDS is 73%. HIV-related TB continues to increase even in provinces with well organized national TB control programmes that are implementing DOTS- the basic package

that underpins the STOP TB Strategy and the Global Plan to Stop TB. The high morbidity and mortality from TB among people living with HIV make TB case detection, treatment and prevention a priority for the Provincial health department.

The unprecedented scale of the HIV-related TB epidemic demands urgent, effective and coordinated action to improve diagnostic, care and prevention services for people living with HIV and TB. As far back as 2001, the heads of States and Government and representatives of States committed themselves when, assembled at the United Nations, from 25 to 27 June 2001, for the twenty-sixth special session of the General assembly, convened in accordance with resolution 55/13 of 3 November 2000, as a matter of urgency, to review and address the problem of HIV/AIDS in all its aspects, as well as to secure a global commitment to enhancing coordination and intensification of national, regional and international efforts to combat it in a comprehensive manner. They were deeply concerned that the global HIV/AIDS epidemic, through its devastating scale and impact, constitute a global emergency and one of the most formidable challenges to human life and dignity, as well as to the effective enjoyment of human rights. This was seen as undermining social and economic development throughout the world and affects all levels of society-national, community, family and individuals.

1.2 Research Methodology

An extensive review of literature on TB, HIV and co-morbidity illness was carried out. The review explored the extent of burden of TB and HIV disease in South Africa when compared with rest of the world. A questionnaire was designed and self-administered (with the help of two registered nurses and a VCT counsellor) in order to assess the level of TB/HIV integration according to the four objectives. Forty questionnaires were submitted, representing a response rate of 83%.

Prior to commencement, two sessions was organized with the two registered nurses and a VCT counsellor on the need for the research. The objectives of the research and their expected level of involvement were also discussed. It was followed by a brainstorming session for the participants. The brainstorming session was to afford the participants the opportunity to:

- Understand the reason for the research
- Their expected level of involvement as participants (responsibilities)
- The intended benefits

The brainstorming session was also used to give health education on TB, HIV&AIDS, and positive attitude. It also provided the opportunity to address their concerns and re-assure them on their rights as participants.

1.3 Structure of the Study

This chapter identifies the problems that were addressed in this study and provides a rationale for the research. The purpose, assumptions and objectives of the study are outlined and a brief explanation of the procedure is provided.

1.4 Research Questions

"What are the operational challenges to adult clients on the TB and HIV/AIDS integration programme".

1.5 Aims and Objectives

- To understand the perception of Clients on TB and HIV/AIDS integration program.
- To establish common areas of Tuberculosis and HIV/AIDS program integration.
- To identify the clients' experience of separate TB, HIV/AIDS care services.
- To provide recommendation for policy review of guidelines for effective TB and HIV/Aids programme.

Chapter 2 provides a review of the relevant literature on the variables. The level of disease burden resulting from TB and HIV/AIDS in South Africa was highlighted. The trends in other countries in sub-Saharan Africa, was also outlined. The chapter will attempt to bring into focus the extent of morbidity and mortality that Clients with TB and HIV/AIDS face as a result of their condition. The role the TB and HIV programme play in ensuring good programme outcome is examined.

Chapter 3 deals with the research method used in this study with specific reference to subjects, instruments and procedure. The instrument used for data collection in this study are discussed and explained in detail as well as the analysis of data is outlined.

Chapter 4 will focus on the presentation of data, analysis of the data and discussion of findings. The limitations of the study will also be highlighted. The aim is to answer the objectives posed in chapter 1.

Chapter 5 contain conclusion on the findings and outlines recommendations

1.6 Methodological Limitations

This study has a number of limitations, including those necessitated by the limited time available and access to some of the participants. The nature of the clinic setting and the researcher's job description also contributed to the minor challenges encountered. As with any literature review, searching electronic databases can miss a significant number of relevant articles. This was reduced by hand searching and speaking to senior colleagues in the field of infectious diseases. However, it is still possible that relevant articles have been missed.

For any study that uses questionnaires, like many evaluation methods occur after the event, so participants may forget important issues. Questionnaires are standardized so it is not possible to explain any points in the questions that participants might misinterpret. The researcher tried to overcome this limitation by piloting the questionnaire with e.g small group of student nurses prior to the brainstorming sessions. However, it will be pertinent to point out that responses were gathered in a standardized way, which makes questionnaires more objective than interviews.

This research uses self-administered questionnaire, with participants providing answers to open-ended questions. The proportion of respondents giving a particular answer provides an understanding of their perspectives on the challenges facing programme collaboration.

Chapter 2: Literature Review

Introduction

Integrated TB/HIV service delivery provides an opportunity to strengthen the health system within the context of (especially) a district network, with a comprehensive primary health care. Service integration emphasizes integration of case management and improved communication between all levels of health service delivery.

Over the last ten years the clinical and epidemiological inter-relationship between TB and HIV infection has been well documented in the research literature.

However, there is very limited research that specifically investigates TB and HIV programme collaboration. Throughout the 1990's articles were published recommending co-ordinated TB and HIV/AIDS programme interaction. As early as 1989 the WHO published a paper on the links between TB and HIV. This stated that co-ordinated action was important and that, "national TB control and national HIV/AIDS programmes should include co-ordinated activities to reduce the impact of the problem, and international organizations and donor countries should be encouraged to support them technically and financially.'' In 1991, Jos Perriens (later a senior manager with UNAIDS) concluded in an article in AIDS that "given the profound impact of HIV infection on the incidence and clinical course of TB, close collaboration between TB and HIV control programmes is essential. "Furthermore in 1991 Dr Kochi (at that time Director of the WHO TB Unit) suggested guidelines for national TB control programmes in view of the HIV epidemic. In 1997, UNAIDS stated in its document TB and AIDS- UNAIDS point of view that "the dual epidemic requires a dual strategy." At the end of the 1990's research suggested that "DOTS alone is unlikely to control TB" in countries with high rates of HIV infection, (with the implication that collaborative efforts between TB and HIV/AIDS programmes will also be necessary).

Few of the published articles discuss in detail how TB and HIV programmes should interact. At the clinical level HIV counselling and testing for TB patients is suggested, and the use of a minimum package of care for HIV patients that includes screening for HIV-related infections (including TB) and treatment as appropriate. Most HIV/AIDS care in Africa is delivered by general health service providers for patients who are usually unaware of their HIV status.

Linking an HIV care package to a well-run national TB programme may provide both programmes with a way of coping with a large co-infected population. Some research suggests that a small core set of cost-effective activities implemented on a national scale may have a much greater impact on the dual epidemic than expanding the activities of TB and HIV/AIDS programmes separately.

One way that TB and HIV/AIDS programmes might interact is through the formulation of joint health information messages. Research conducted in Uganda looking at the provision of joint health information messages for HIV and TB shows a significant association with improved knowledge. This study also suggests that linking TB and HIV health education messages could lead to improved TB case finding and not to a decrease as might be expected by those concerned with the dual stigma of TB and HIV. Little is published on TB and HIV/AIDS programme interaction at national or international level, where it is mentioned it is noted to be ineffective. De Cock suggests that "major efforts will be needed by ministries of health and TB control programmes to overcome the cultural and philosophic differences that have existed between TB and HIV/AIDS control programmes" and that "there is a need for better communication and integration of activities."

The study explores the extent of service integration that exist in TB and HIV/AIDS programme in the designated clinics (TB/HIV linkages). It also highlights the increasing burden that results from the present approach currently existing in those facilities. It is pertinent to give a case analysis TB and HIV/AIDS in the Country and then narrow down to Northern Cape Province and the efforts made to tackle the disease burden.

It is important to explain the national guidelines and outcome definitions as it pertains to TB and HIV/AIDS programme to assist us in understanding the programme and the effectiveness of both programmes. This study will also focus on the challenges that militate against full integration of both programmes in the facility. Recent statistics on TB and HIV/AIDS will be highlighted.

2.1 Tuberculosis

The management and control of the spread of TB in South African, in particular the Northern Cape, poses a major challenge. Whilst there are gains observed in TB outcomes in the last

two years, an increasing number of patients continue to contract TB. The emergence of Multi (MDR-TB) and Extensive Drug Resistant (XDR-TB) TB has further warranted strengthening of the program.

2.1.1 Case finding

Over the past decade, the number of people with diagnosed TB has escalated. This increase in the TB caseload could be attributed to the vigorous province-wide TB awareness campaigns. The figures and tables below highlight the picture of TB in the Northern Cape Province. A four thousand (4000) increase in the number of all TB cases has been reported between 2004 and 2009 and the same trend has been observed for the number of new smear positive TB cases for the same period although a reduction was marked during 2010.

Table 2.1

Case finding

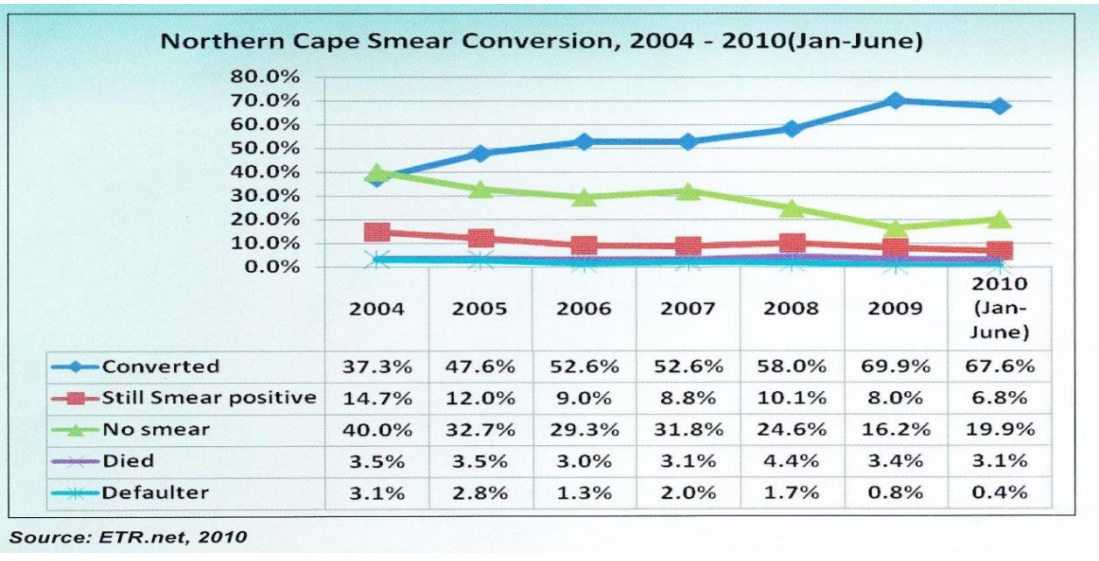
The number of new patients diagnosed with TB has increased over the past few years. This increase in the TB case load could be attributed to the vigorous province-wide TB awareness campaigns.

Table 11: **Northern Cape TB Incidence per 100 000 Population 2004 – 2010**

Year	Pulmonary TB				Extra Pulmonary TB		All TB cases	
	Smear +		All PTB cases					
	N	Incidence per 100 000	N	Incidence per 100 000	N	Incidence per 100 000	N	Incidence per 100 000
2004	3 631	327	5 699	514	458	41	6 127	552
2005	3 982	359	6 295	567	534	48	6 829	616
2005	3 982	359	6 295	567	534	48	6 829	616
2006	4 155	375	6 757	609	620	56	7 377	665
2007	3 879	350	6 828	615	751	62	7 520	678
2008	4 054	365	7 629	688	563	51	8 192	738
2009	5 238	456	9 821	856	873	71(76)	10 694	932
2010	3 009	273	7 014	635	713	65	9 403	852

Source: ETR.Net, 2010

Figure 2.1



Source: ETR.net, 2010

2.1.2 Case Holding

The proportion of patients who convert at two (2) months improved from 37.3% in 2004 to 69.9% in 2009 and preliminary 67.6% in 2010 (Jan-June), whilst those remaining smear positive during the same period has halved. Improved patient management has contributed to the achievement. Later or no sputum collection at 2 months, poor management of sputa results and late collection of sputa are still impacting negatively on case holding.

The Northern Cape Provincial TB programme is a separate directorate to the Comprehensive HIV/AIDS Care & Support, Management and Treatment (CCMT). Both TB and HIV/AIDS programme, as well as immunization, chronic care etc. are run in all the primary health care facilities in the province with the national guidelines. The Provincial TB control programme in line with the national TB programme guidelines is working with partners (non-governmental organizations) to implement a TB control programme across the five districts in the province. The cure rate remains low and the case detection have not been optimized. The implication of this is that the prevalence, TB associated mortality and rate of TB transmission remain high. The incidence also remains high with an increasing burden of drug-resistant TB.

Prior to June 2009, the TB programme was always part of the CCMT directorate but faced significant challenges. Inadequate TB control programmes prior to June 2009 have led to an increased burden of disease (inadequately treated TB patients live longer with chronic disease and infect other people) and the emergence of drug-resistant TB. The HIV epidemic has led to an enormous increase in the number of TB cases, in the five districts within the province where HIV are both common. TB and HIV service integration will depend on implementation of the DOTS strategy and other interventions. In addition to effective case-findings and good cure rate, ensuring good infection control measures and decreasing the TB and HIV transmission. Directly observed therapy ensures good adherence to treatment and should almost, always leads to treatment cure.

However, the goals of TB control are to reduce mortality, morbidity and disease transmission until TB no longer poses a threat to public health. This intervention will reduce human suffering and the social and economic burden on families and communities as a consequence

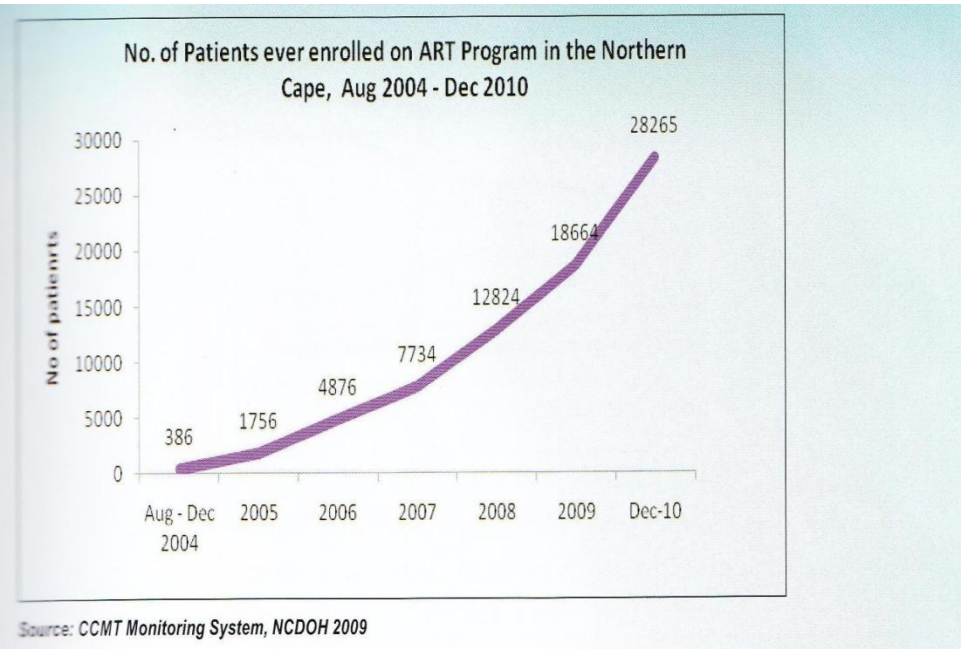
of TB. The provincial TB control programme need significant strengthening to achieve the targets for TB control in the province.

2.2 HIV/ AIDS

HIV in sub-Saharan Africa constitutes some 64% of the global total of 39.5 million people living with HIV. Southern Africa remains the most affected region, and the epidemic in South Africa is interlinked with epidemics occurring in neighbouring countries. South Africa, Swaziland, Lesotho and Botswana reported the highest antenatal HIV prevalence levels in the world in 2006.

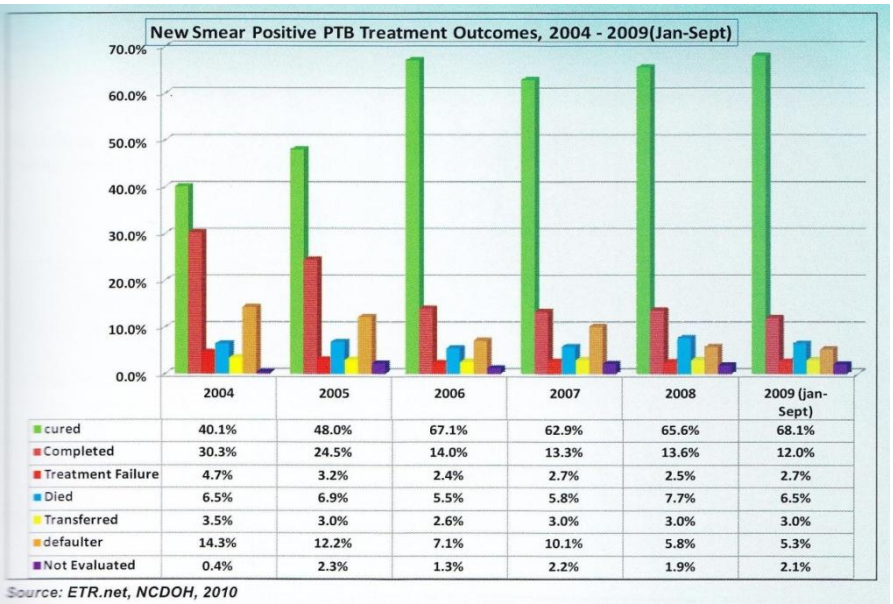
The national strategic plan (NSP) 2007-2011 is designed to guide South Africa's response to HIV/AIDS & STIs control in the past five years. This strategy draws on lessons learned in responding to HIV and AIDS in the last decade. The NSP builds on existing strengths and successes, looks at innovative ways to address areas of weakness, and sets ambitious targets to meet the broad aims the national response to HIV and AIDS and STIs. However, there was no mention of HIV/AIDS & TB Programme linkage in that important document and at such level that questions the claim that NSP draws on lessons learned. That in my opinion becomes the missing link at the national level which should have been the focal point of galvanizing both programmes. This could also be partly why much progress has not been made despite the level of efforts made so far. For instance, a close look at the HIV statistics in the Northern Cape Province attest to that fact as highlighted below.

Figure 2.2



Source: CCMT Monitoring System, NCDOH 2009

Figure 2.3



	2004	2005	2006	2007	2008	2009 (jan-Sept)
cured	40.1%	48.0%	67.1%	62.9%	65.6%	68.1%
Completed	30.3%	24.5%	14.0%	13.3%	13.6%	12.0%
Treatment Failure	4.7%	3.2%	2.4%	2.7%	2.5%	2.7%
Died	6.5%	6.9%	5.5%	5.8%	7.7%	6.5%
Transferred	3.5%	3.0%	2.6%	3.0%	3.0%	3.0%
defaulter	14.3%	12.2%	7.1%	10.1%	5.8%	5.3%
Not Evaluated	0.4%	2.3%	1.3%	2.2%	1.9%	2.1%

Source: ETR.net, NCDOH, 2010

2.2.1 TB and HIV Collaboration Programme

It is generally understood that TB and HIV are closely interlinked. Research shows that there is poor completion of preventive therapy in this group and recommends that "increased collaboration between HIV/AIDS and TB control programmes may be needed to increase adherence to prevention guidelines." If countries where TB and HIV prevalence is low are suggesting that collaboration is the way forward then it is very likely that similar collaboration is needed where TB and HIV prevalence is high. There are few documented reports of consolidation and integration between HIV/AIDS and TB programmes. In the mid-90s after a three-year experiment to consolidate services, the Department of Health in Florida USA separated programmes for the prevention and control of HIV/AIDS, STIs, and TB. It was felt that the disadvantages of integration far out-weighed the advantages; these included the overshadowing of smaller programmes (TB by HIV), lack of budget control, lack of direction for districts and disruption of the TB control programme. However, certain features of the consolidated programme that worked well were preserved; these included the attendance at quarterly co-ordinating meetings of HIV, STI and TB managers and the involvement in strategic planning of all three groups.

TB control programme in sub-Saharan Africa is closely dependent on the control of HIV. Research suggests that approaches to enhance interaction between TB and HIV/AIDS programmes will be needed to improve the current TB situation along with the support of external donors. But why hasn't this been optimized? The available literature discussing this

is sparse. De Cock suggests that TB control programmes “have not adapted to the altered realities of the HIV/AIDS era.” and Ainsworth suggests that there has been reluctance by national governments to take full responsibility for HIV prevention and that governments and international agencies have failed to set realistic priorities. Finally, It is clear that lack of TB and HIV/AIDS service integration is still a challenge both in countries with low and high prevalence of both diseases, aside South Africa where the burden of disease remain high. HIV/AIDS clinics have not optimized use of services as an entry point for active TB case finding and vice-versa. This challenge is still clear and it is important to address the challenges in order to optimize service integration. It is also important not only to look at the programme lapses, but to also address challenges from the patients’ perspective.

Chapter 3: Research Methodology

Introduction

This chapter describes the research design and method of research used. The study adopted quantitative approach with the help of questionnaire because of the nature of the topic. Data was collected from the participants (using the inclusion criteria) using a questionnaire. The quantitative data was analysed using Excel and SPSS software while coding was used to analyse the quantitative data. The choice of the research design and data collection was based on the research objectives.

3.1 Research design

Polit & Hungler (1999) describe a research design as an overall plan for obtaining answers to the questions being studied and a way of handling some difficulties encountered during the research process.

3.1.1 Quantitative research

The researcher intended to gain insight into the challenges that mitigates against full TB & HIV/AIDS service integration. There was also need to understand the patients' perspective based on their experiences while accessing TB care and HIV/AIDS care from two different service points respectively.

The quantitative research seeks to answer questions of how much and how many and is concerned with relationship (more importantly causal relationships) between variables (Polit & Beck, 2004). It often takes the form of experiment, quasi-experiment or non experimental design. Non experimental research design includes descriptive research that investigates situations, and relationships in variables without manipulation of independent variables (Polit & Beck, 2004). It usually seeks to establish causal relationships between two or more variables, using statistical methods to test the strength and significance of the relationship (Christensen, 2004).

The research approach adopted using a self administered questionnaire with open-ended questions in order to ascertain the perspective of adult clients (based on inclusion criteria) based on their experiences in accessing care from different service points.

This study helps us to gain a more complete picture of the situation of adult clients while accessing TB and HIV/AIDS care from different service points respectively. Folch-Lyon & Trost (1981) noted that while quantitative methods are suited to identifying 'how' individuals behave, qualitative methods are better equipped to answer the question 'why'. In chapter 4 the findings from the quantitative approach are highlighted. This is done in order to gain a clear, complete and more reliable picture of the effects of the extent of challenges faced in TB/HIV & AIDS program collaboration.

3.1.2 Research Population

The study (target) population was clearly defined in respect of individual participants, place and time. A total of 48 adult clients attending the wellness centre (Infectious Disease clinic in Kimberley hospital complex) were selected following randomization.
The researcher was guided by the research objectives in chapter 1 to target the desired population (Infectious disease clinic/wellness centre) within Kimberley, to give answers to the topic, from the perspective of Adult clients previously/or currently diagnosed with Tuberculosis and /or HIV.

The purpose of the study was explained to the accessible population and the participants (chosen based on inclusion criteria) had brainstorming sessions. A sample was obtained from the Adult clients on wellness program at wellness centre in the Kimberley hospital complex.

3.1.3 Sampling Criteria

According to Polit & Hungler (1999), the researcher should be specific about the criterions that define who are included in the population. The participants had to be Adult clients (patients) on Tuberculosis treatment program and/ or HIV& AIDS program within the Frances Baard district, but restricted to those who visit the infectious disease clinic/ wellness centre in Kimberley.

They either had been diagnosed with TB/HIV at some point and received/ receiving treatment at the infectious disease clinic and willing to participate. These respondents for the questionnaire had to be able to self-administer it and return it to the researcher through one of the clinic nurses. The respondents were asked to give written consent to be eligible to participate in the study.

3.1.4 Sampling method (frame)

In this case the intended study population from which the sample was drawn is from the Adult clients accessing care at wellness centre in Kimberley hospital complex. The study sample was from the wellness centre clients who are exclusively adult.

Randomization was used as a control technique. Christensen describe randomization as the most important and basic of all the control methods, it is a statistical control technique designed to assure that extraneous variables, known or unknown, will not systematically bias the study results (Christensen; 2007, 264).

The researcher used a Simple Random Sampling in order to ensure that all elements (adult clients) have an equal and independent chance of being chosen as stated by William Schofield (Sapsford R, Jupp V, 30).

A list of the clinic register was used as a sampling tool. All clinic attendants in the register were grouped together and given numbers. Each third clinic attendee was then selected from the sampling frame until a desirable number was reached. A total of 48 Adult clients were selected. The participants were all above the age of 18 years of age or older and they expressed their willingness to participate in the study.

3.1.5 Data collection and analysis

In this study, the research approach was quantitative in nature. A highly structured method was used for collecting data. Sapsford R and Jupp V outlines that there are two main structured forms of asking questions: the interview schedule and the self-administered questionnaires. He went on to say that they both share the need for questions to be

unambiguous and easy to read, so that what he or she is supposed to do is entirely clear to the respondent and/or interviewer. (Sapsford R and Jupp V, 2006, 97)

The researcher developed a questionnaire as a data collection tool. In order to facilitate understanding by respondents, the aims and objectives of the study was outlined in the research protocol and explained to the participants during the brainstorming sessions. As explained in this research report, the questionnaire was pilot tested in the clinic (wellness centre) using student nursing staffs that were at a time doing their quarterly clinical study rotations. In order to align the objectives of the study with its findings, the researcher focused on the population of clients attending the infectious disease unit in the provincial regional hospital (KHC), and excluded the other clinic located at a Day hospital as earlier planned due to administrative constraints.

Prior to conducting the study, the researcher obtained permission from the hospital management. The researcher obtained the sampling frame (list of all the clients attending the wellness centre for their comprehensive care, management and treatment of HIV/AIDS) from the Patient register at the wellness centre. The researcher used a simple random sampling wherein every fourth person from the sampling frame was selected.

The researcher then informed the clients about their selection, and seeks for their willingness to participate through a written consent. But before this, they were invited for a brainstorming session, with the unit manager and nurses in attendance. Data was then collected as per the time agreed upon with the management. The questionnaire was administered to clients on their booked clinic (every Thursday) days after signing a consent form.

3.1.6 Research questions

In order to highlight the operational challenges to effective TB and HIV/AIDS programme collaboration, from the participation' perspective, research questions were developed (Refer Annexure)

3.1.7 Ethical consideration

Christensen refers to research ethics as a set of guidelines to assist the experimenter in conducting ethical research (Christensen; 2007).

The following principles were followed:-

a) Management of consent.

The researcher requested permission from the management of Kimberley hospital complex to conduct research. This was done through a formal written document which outlined the objectives and nature of the study to be conducted.

b) Respect for persons and their autonomy

Christensen outlines that this can be achieved when the prospective research participants has the right to choose to participate in a research study and denial of this sows a lack of respect for that person (Christensen; 2007, 141). Respondents who were not interested in participating in the study were afforded an opportunity to withdraw.

Christensen defines informed consent as a process of fully informing the research participants about all aspects of the study (Christensen, 2007). Brainstorming sessions were held to help them decide whether they still want to proceed with the study or not. They gave written consent indicating their willingness to proceed with the study, and the very few who declined were thanked and bid farewell.

c) Beneficence and Non-maleficence

Christensen defines beneficence as doing good and nonmaleficence as doing no harm. (Christensen; 2007). He further went on to say that this principle states that a researcher must design and conduct research studies in a way that minimizes the probability that the participants receive some benefits. It was the responsibility of the researcher to ensure participants are not harmed at all during the study.

d) Confidentiality, Anonymity and the Concept of Privacy

Christensen define confidentiality as an agreement with research investigators about what may be done with the information obtained, although known to the researcher group, will not be revealed to anyone other than the researcher. Anonymity refers to keeping the identity of the research participants unknown. Privacy refers to controlling other people's access to information about a person (Christensen 2007; 162-163). The researcher guaranteed the confidentiality of the information obtained from the participants.

Chapter 4: Data Presentations, Analysis and Findings

Introduction

This chapter focuses on the findings, analysis and interpretation of findings of the study. The findings of the research are presented by highlighting the perspective of the participants who at some point were subjected to TB treatment in a different health care centre from where they are presently receiving comprehensive clinical care for HIV/AIDS. They were able to present through an open-ended questionnaire the experiences encountered during the treatment period and their own opinion on TB and HIV/AIDS collaboration. A suitable and convenient sampling method was utilized in order to obtain a simple random sample of 48 Adult clients attending wellness centre in Kimberley hospital complex.

According to McMillian & Schumacher (1993) the aim of analyzing and interpreting research data is to test, achieve research objectives and provide answers to research questions. In this study, the research analysed and interpreted data that emanated from the questionnaire under the four objectives of the study.

4.1 Aim and Objectives of the research

1. To understand the perception of Clients on TB and HIV/AIDS integration program.
2. To establish common areas of Tuberculosis and HIV/AIDS program integration.
3. To identify the clients' experiences of separate TB, HIV/AIDS care services.
4. To provide guidelines for effective TB and HIV/AIDS program.

The conclusions are evidence based. Results from the data were gathered to:

1. Do a **qualitative assessment** on the perception of the TB/HIV integration program

2. To understand the degree of correlation **between** the ART programs with the TB program through responses obtained.

3. To quantify the **experiences** of HIV patients and TB patients in separate services or even form integrated service points.

4. Use these above results **to support or disprove** already proposed or already in use TB and HIV/AIDS care guidelines as well as **develop proposed** guideline procedures that are evidence-based

4.2 Sampling Method and Target Population

The sampling method used was random sampling procedure; for which each possible sample of a given size is equally likely to be the one obtained. The Adult clients medical records (folders) were random sampled, and then arranged for the individuals to fill in the questionnaires. The target population was all patients who are HIV positive in a staff wellness setting and the respondents have had/have not had exposure to TB/HIV integration before or at the current Facility.

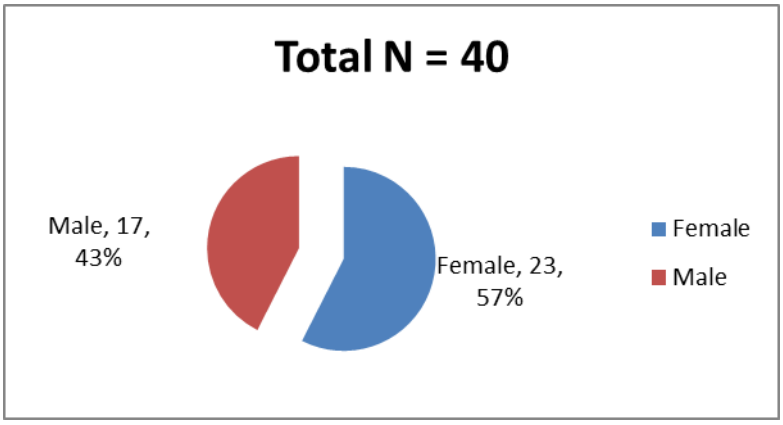
4.3 Demographic information of participations according to the questionnaire

Forty eight questionnaires were distributed to Adult clients attending wellness centre/infectious disease clinic in Kimberley hospital complex. The response rate was 83%, which was very encouraging because of the brainstorming sessions undertaken. The response rate made it possible to continue with the study because it was likely to produce diverse and more objective information (McMillan & Schumacher (1993).

The overall majority of the respondents were Adult female clients (57,5%) while the Adult male clients that responded were 42,5%. This pattern of Adult client distribution can be attributed to the fact that Adult female clients are more affected with the disease more than the male. This pattern of distribution demonstrates that African women are being infected at an earlier age than men, and the gap in HIV prevalence between them continues to grow. At the beginning of the epidemic in sub-Saharan Africa, women living with HIV were vastly outnumbered by men. But today there are, on average, 13 infected women for every 10 infected men in 2002. The difference between infection levels is more pronounced in urban areas, with 14 women for every 10 men, than in rural areas, where 12 women are infected for every 10 men (Stover, 2004). The chart below illustrates this.

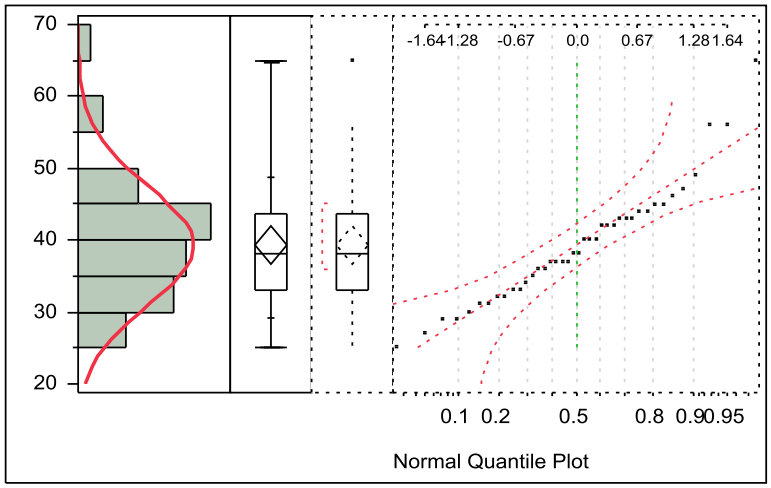
4.4 Descriptive

Figure 4.1 Gender of Respondents



The age distribution of Adult HIV/TB infected clients showed that the minimum age was 25years and the maximum age was 65years. The average age was 40. The age graph is showing the age distribution as shown below.

Figure 4.2 Age Distribution



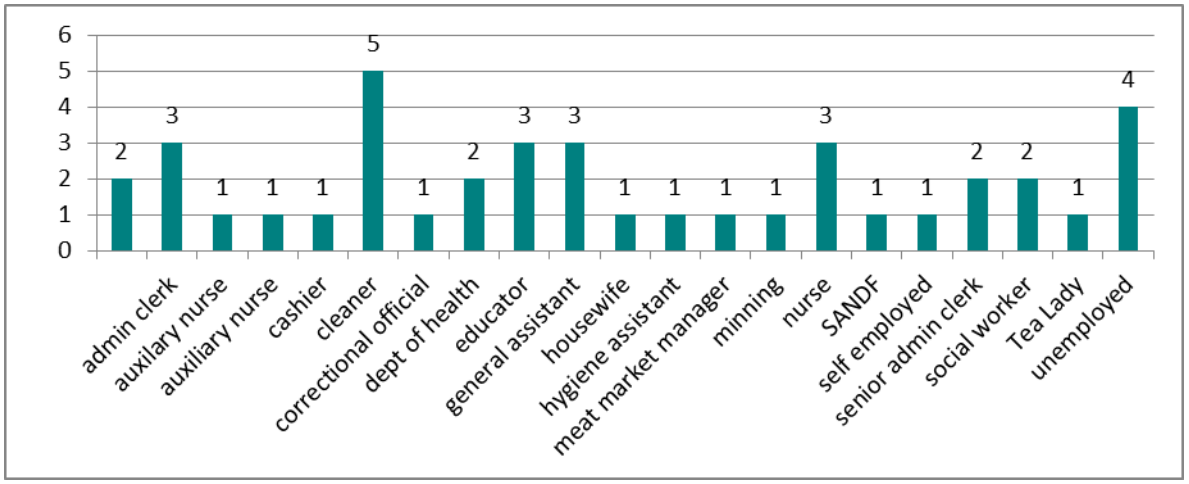
The age distribution is assumed to be normal as evidenced by the Normal Quintile plot (points are very close to the line) and from the Histogram, it's also evident. This will be useful in future analysis involving age.

Moments

Mean	39.2
Std Dev	8.3
Std Err Mean	1.3

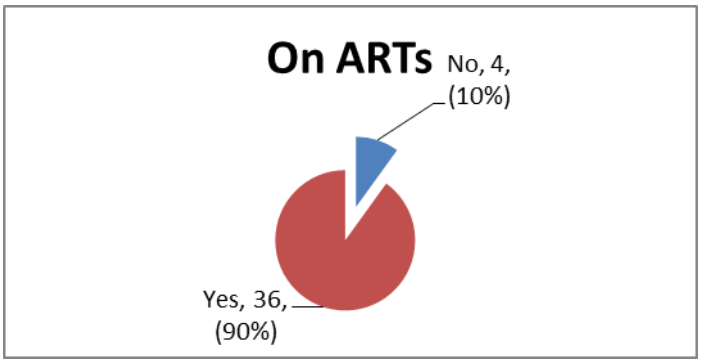
Gender	0-0.5	0.5-1	1-2	2-4	≥5	NO RESPONSE	TOTALS
MALES	5=12.5%	2=5%	3=7.5%	5=12.5%	2=5%	0=0%	17=42.5%
FEMALES	5=12.5%	3=7.5%	7=17.5%	8=20	4=10	1=2.5%	23=57.5%
TOTALS	10=25%	5=12.5%	10=25%	13=32.5	6=15	1=2.5%	40=100%

Figure 4.3 Occupation



The modal (most frequent) Occupational class was cleaners, probably due to their availability, followed by the unemployed.

Figure 4.4 Adult clients on ART (Anti-retroviral treatment) at the wellness centre



36 out of 40 of our respondents are already on ARTs and only 4 are not yet on ARTs, they are still on ART treatment readiness programme, on-going counselling and eligibility assessment.

Table 4.1 Time in years when the adult clients were diagnosed with HIV

Gender	0-0.5	0.5- 1	1-2	2-4	≥5	NO RESPONSE	TOTALS
MALES	5=12.5%	2=5%	3=7.5%	5=12.5%	2=5%	0=0%	17=42.5%
FEMALES	5=12.5%	3=7.5%	7=17.5%	8=20%	4=10%	1=2.5%	23=57.5%
TOTALS	10=25%	5=12.5%	10=25%	13=32.5%	6=15%	1=2.5%	40=100%

Table 4.2 Frequency table: Time in years when adult clients were diagnosed for HIV

Level	Count
>5yrs ago	6
0-6 months ago	10
1-2 yrs ago	11
2-4 yrs ago	8
6-12 months ago	4
Total	39

The majority of respondents tested for HIV between one and two years ago.

Figure 4.4 Graphical representatio: Time in years when the adult clients were diagnosed for HIV.

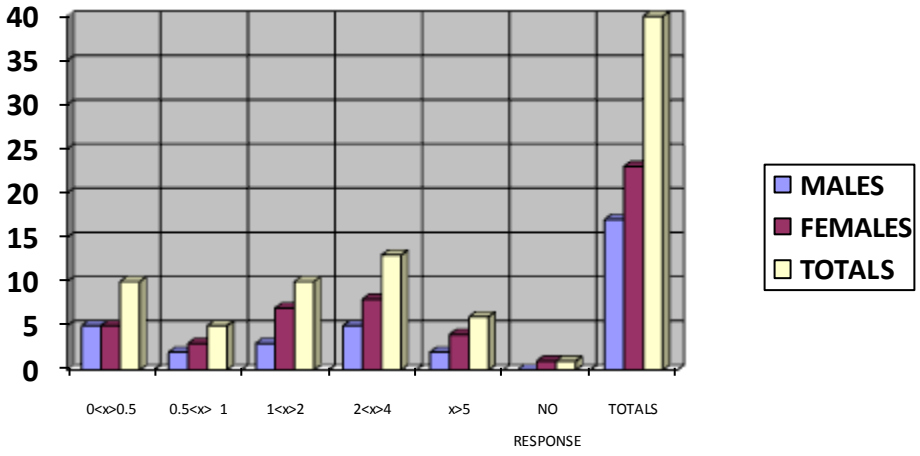


Table 4.3 Operational challenges experienced by adult clients when visiting clinics

Possible challenges	Transport	Turn around time for result	Both	No responses	Totals
MALES	4=10%	4=10%	8=20%	7=17.5%	23=57.5%
FEMALES	3=7.5%	6=15%	7=17.5%	1=2.5%	17=42.5%
TOTALS	7=17.5%	10=25%	15=37.5%	8=20%	40=100%

Figure 4.5 Graphical representations of operational challenges experienced by adult clients when visiting clinics

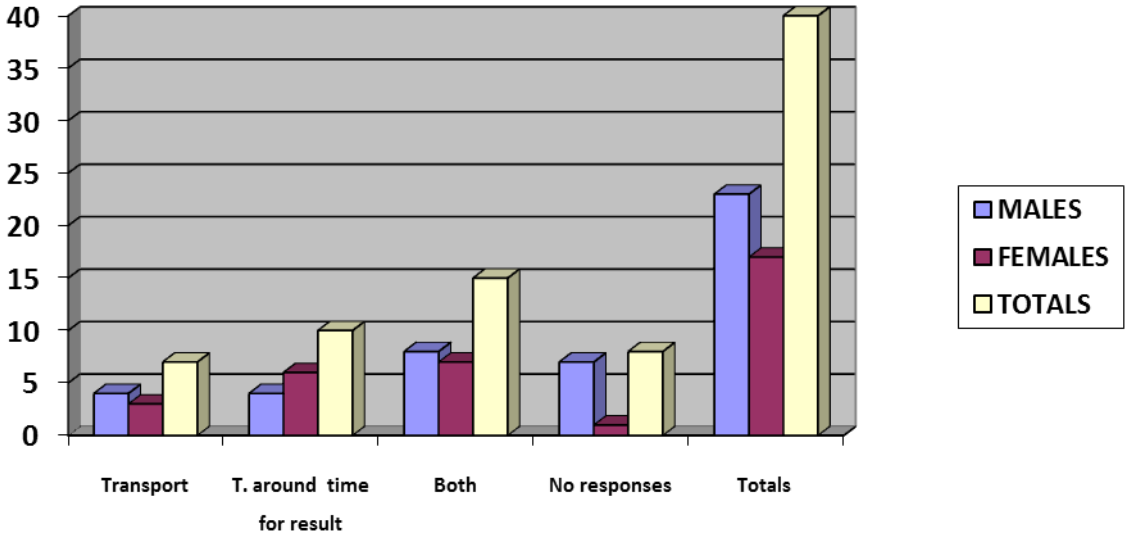


Table 4.2 Response to Clients' perception on the need for TB/HIV Programme Integration: Number and (%)

	Transport cost	Save time	To improve care	No response	Totals
Males	0 (0.0)	4 (10.0)	8 (20.0)	5(12.5)	17(42.5)
Females	2(0.0)	4 (10.0)	10(25.0)	7 (17.5)	23 (57.5)
Total	2(5.0)	8(20.0)	18(40.0_	12(30%)	40 = 100%

Figure 4.6 Graphical representation: response to Clients' perception, on the need for TB/HIV Programme Integration.

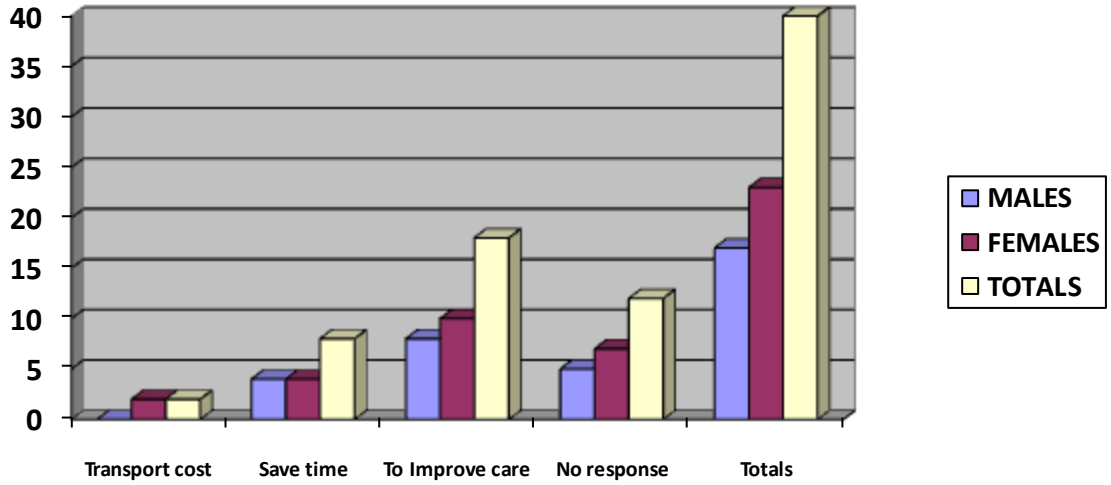
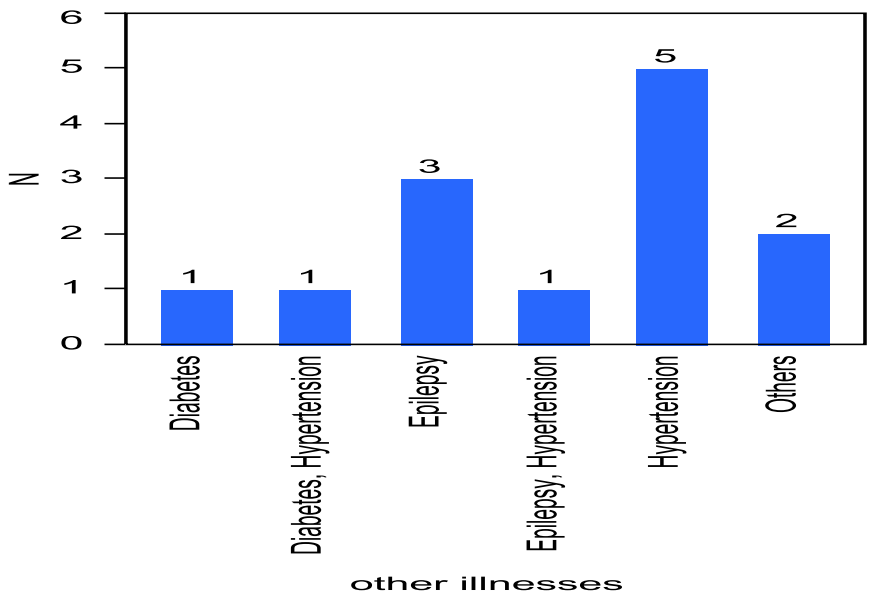


Figure 4.8 Chronic illnesses reported by adult clients on wellness programme.

Other illnesses

Chart

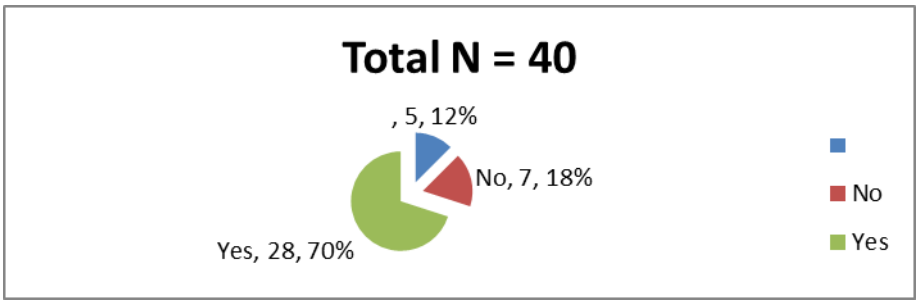


Hypertension is the most common other illness that the respondents presented.

Hypertension is the most common co-morbidity illness that the respondents presented with 12.(5) %

Recommendation by the adult clients on programme (TB/HIV) integration.

Figure 4.9



70% of the respondents recommended improvement in the quality of care at either a TB or ARV service point. Five adult clients did not respond whether they are in favour of integration or not as indicated on the pie chart above.

4.5 Data Analysis and Conclusion

4.5.1 To understand the perception of Clients on TB and HIV/AIDS integration program

To address this objective, the investigation will only be targeting those who are or were on TB treatment before (27) and analyse their responses regarding TB/HIV integration.

To better understand their perception, respondents were asked if they recommend that TB treatment and ARV treatment be done at the same service points. 3 out of 27 said No and 24 (88.9%) said Yes. This is overwhelming evidence that the vast majority of respondents recommend integration of the Program by doing it at the same service point.

On being asks if they are willing to support the awareness campaigns on TB and HIV/Aids collaboration of those 27, 26 responded (92.2%) they would be willing to support the TB/HIV integration. They supported this for the following reasons:

- To reduce transport
- To save time (improve turn around time)
- To improve quality of care

Conclusion: based on this experimental evidence, the majority of respondents in the sample recommend the same service point and also are willing to support the integration of TB and HIV.

4.5.2 To establish common areas of Tuberculosis and HIV/AIDS program integration.

The respondents here include everyone in the sample as they have had experience in HIV/Wellness Clinics and/or the TB clinics or TB service points. On asking the respondents the question whether they received Health Education at the ARV Clinic as well as at the TB Clinic, the results were as follows:

23 out of 40 respondents received education at both the ARV and the TB Clinics, (57.5%) which indicates an association and the commonality between the two Programs, and we will further investigate if there are other common areas.

To find out other common areas, respondents were asked about the Quality of care at 1) the ARV/Wellness Clinic and 2) the TB service at their nearest Clinic.

The response variables here are categorical, therefore discrete and the Chi-square Test at 5% significance level (two-tailed) was used to test whether the Quality of service rated is independent of the Program.

(Null Hypothesis)
Ho: The Quality of Service rating is independent of the Clinic (whether ARV/Wellness or TB clinic)
Alternate Hypothesis
H1: The Quality of Service ratings are related at either Clinics

If the Null Hypothesis is rejected, then we can conclude that there are common areas between Tuberculosis and HIV/AIDS Programs.

Table 4.4

The contingency table below shows the results

		Quality of care at TB Clinic				Total
		Non-response	Excellent	Good	Fair	
Quality of care at ARV/Wellness Clinic	Non-response	4				4
	Excellent	8	9	6	1	24
	Good	3	1	2	4	10
	Fair	1		1		
Total		16	10	4	10	40

The Chi-square output is below:

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	15.883(a)	9	.069
Likelihood Ratio	16.600	9	.055
N of Valid Cases	40		

81.3% of respondents did have an expected count less than 5 because of non-respondents. This makes the Chi-square test unreliable. At maximum 20% should be having an expected count less than 5. However we will proceed to interpret the results of the test.

The Probability of the Chi-square test statistic= 15.833, p value =.069>0.05 which is the significance level we have chosen. So we do not reject the Null Hypothesis and conclude that the Quality of service at the ARV/Wellness Clinic is significantly different from the quality of service at the TB Clinics

This result strengthens the need for integration so as to have the same standards of care for ARV/HIV as well as TB Patients.

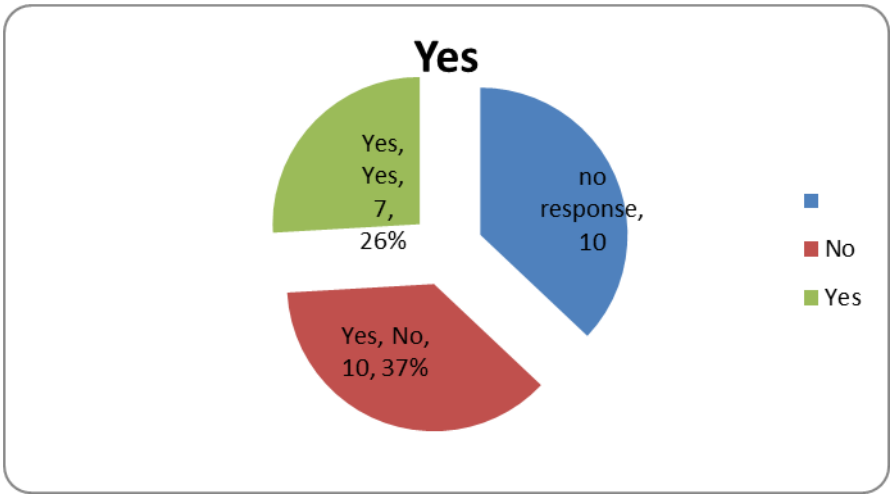
4.5.3 To identify the clients' experiences of separate TB, HIV/AIDS care services

17 of the 27 respondents received TB treatment from a different clinic from their ARV/Wellness Clinic, the remaining 9 did not respond whether they received TB treatment from a different Clinic from their ARV/Wellness Clinic.

This shows that integration in terms of service points was not experienced by most of the respondents of the sample population. 17/27 (68.0%) did not experience the integration with respect to service points being at a "one stop shop".

The next question was if the respondents are having problems receiving TB treatment from a different clinic to the ARV/Wellness clinic, the results below were obtained.

Figure 4.10

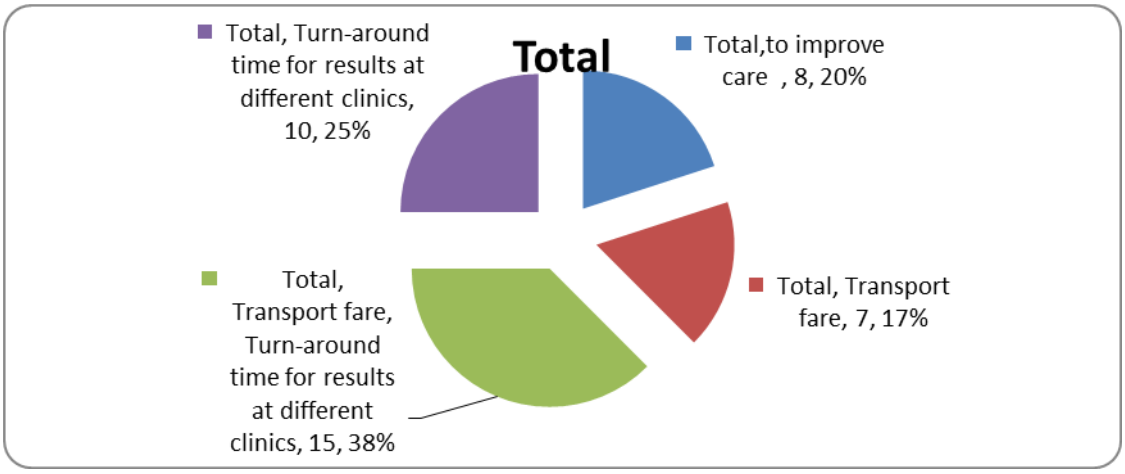


Those who experienced problems were 26%, those who did not experience any problems were 37% and non-responses were also 37%.

We can conclude here that receiving treatment at different clinics did not present a challenge to the respondents; this can shape the recommendations that treatment can be dispensed at different points but care must be integrated. This is an adherence issue.

On asking the respondents the question what are the main challenges that they have faced at either the two service points or both, the pie chart below depicts the result.

Figure 4.11 The main challenges combined as a response was Transport fares, Improving quality of care and Turn-around times for different results.



4.6 Findings

To date there has often been limited interaction between TB and HIV/AIDS programmes. Now, due to the increasing reality of the benefits of collaboration, and witnessing the devastating impact of HIV-related TB in sub-Saharan Africa, international, national and non-governmental agencies are increasingly starting and promoting collaboration, as this has the potential to lead to significant public health gains. The participants that participated in the research highlighted the need to urgently start TB and HIV/AIDS programme collaboration from the same service point as part of the comprehensive care given to clients.

TB and HIV/AIDS programme collaboration can be described in a number of ways. Research participants highlighted their challenges at some point while accessing TB services from a different service point from the HIV clinic which in their opinion are "operational challenges" that are avoidable. They felt that programme collaboration between TB and HIV/AIDS could have saved them a lot of operational challenges and reduce the morbidity and mortality associated with the co-morbid illness. Informal discussions with the programme managers alluded to the fact that having two separate directorates for both programmes has contributed to the operational challenges, and they confirmed that TB and HIV/AIDS programmes had generally not integrated at national or provincial levels. However, generally

speaking, although programmes showed little evidence of past interaction there was a consensus that national department of health should as a matter of urgency provide the needed platform for TB and HIV/AIDS to start collaborating at all levels.

4.6.1 Barriers to TB and HIV/ AIDS programme collaboration

Analyzing the barriers (operational challenges) to TB and HIV/AIDS programme collaboration enables some understanding of why this has often been limited to date, and how to promote effective programme collaboration in the future. It is important to note that barriers to TB and HIV/AIDS collaboration differ between provinces and countries.

The main barriers to TB and HIV/AIDS effective programme collaboration are the following:

- A lack of TB/HIV strategic framework and programme monitoring at the national level
- Different programme structures in most of the provinces, and separate financing
- A low priority given to TB programme, whereas HIV/AIDS is given high priority
- A lack of strong political commitment at both national and provincial levels of government
- A poor national and provincial awareness of the link between TB and HIV/AIDS
- Health-care staff attitudes to, and awareness of, HIV-related TB. The main barriers are discussed more fully below.

During the late 1980s and early 1990s, WHO through GPAs and TUB meetings produced recommendations on TB and HIV/ Aids programme collaboration. It is important to understand, so that lessons can be learnt for the future, why these recommendations lacked wider dissemination or were rarely implemented. It appears to me that a lack of political commitment to TB and HIV, both nationally and provincially, and different programme structures in almost all the provinces, all had an adverse effect on the uptake of recommendations. The recent high level political commitment to TB and HIV (as inscribed in the new National Strategic Plan for South Africa, NSP 2012-2016), will hopefully result to an appreciable impact and chant a new course for joint solutions. Until then, one must remain cautiously optimistic that the scourge of TB and HIV/AIDS will continue to rear its ugly head in South Africa. Under-resourcing to particularly TB programme and separate financing

(Conditional grant only allocated to HIV programmes) to have often inhibited TB and HIV/AIDS programmes collaboration. An additional reason why national TB and HIV/AIDS programmes have been slow to collaborate could be attributed to unhealthy competition between the programme managers, and inadequate communication from national and provincial levels.

Programme structures, egocentric tendencies of programme managers and focus are commonly cited as barriers to interaction. The devastating effects of lack of collaboration have been quite huge, and we have learnt our lessons. It will therefore be important that TB and HIV programmes have a clear understanding of areas of common interest and collaborate at every level of care. An effective way to overcome the differences in programme structure and culture will be to encourage joint staff meetings (both clinical and operational personnel). These joint regular meetings could be used to increase understanding between the two programmes, to discuss areas of common interest, to plan joint activities and identify ways in which to work synergistically. Fortunately, the new national strategic plan has clearly provided the plat form for joint activities.

Although many of the barriers listed here still need to be overcome, there has been some progress in promoting TB and HIV programme interaction, such as HAST meetings, etc. The international community is increasingly aware of the links between TB and HIV with the result that political commitment is increasing and WHO has taking the lead in finding solutions to HIV-related TB, in particular, WHO is co-coordinating the Global Working Group on TB/HIV under the auspices of the STOP TB Partnership and developing a strategic framework to decrease the burden of TB/HIV. At the same time, HIV/AIDS comprehensive care, including TB and HIV treatment, is moving up the HIV agenda, attracting more resources.

4.6.2 Mechanisms to promote TB and HIV/AIDS programme collaborations

By identifying opportunities and mechanisms for effective TB and HIV/AIDS programme collaboration, barriers to interaction can be overcome, and a more effective and coherent general health service response to HIV-related TB implemented. TB and HIV/AIDS programmes need to strengthen general health service provision, especially at the primary health care facilities so that care is provided holistically. With the decentralization of care

being witnessed in South African health facilities, there appears to be considerate potential for collaboration between TB and HIV/AIDS programmes. However, re-engineering of the primary health care to strengthen services and ensure holistic approach will provide the platform for effective TB and HIV/AIDS programme collaboration.

Collaboration is now seen as an effective use of resources to address the human and financial cost of HIV and TB. Whereas HIV has a ring fenced huge conditional grant to execute its programmes, TB still struggles with budget constraints. Ways to promote more effective TB and HIV programme collaboration can be divided into national, provincial and general mechanisms, as this seems to reflect the funding and management of TB and HIV/AIDS programmes. National mechanisms to promote interaction between TB and HIV programmes include the followings:

- In-country high level political commitment
- Joint funding of collaborative TB and HIV programme activities
- Joint national and provincial strategic planning
- A common goal for national and provincial TB and HIV programme interaction

The importance of re-engineering of the primary health care system in South Africa cannot be over emphasized. It will ensure overall strengthening of general health service providers, health system and quality of care. The objective of these will be to benefit both and HIV programmes through synergy. STOP TB Partnership arm of WHO needs to help NTPs and NACPs to understand that collaboration between programmes is a major opportunity, not a threat, and backed by WHO and UNAIDS.

TB programmes could benefit from HIV/AIDS programme experience of multi sectoral collaboration and mobilization of communities, and the goal of improved holistic care. NIMART programme has so far been quite successful, and is one aspect of potential TB programme benefit. HIV programmes could benefit from TB programme experience of good clinical practice (e.g. screening protocols, monitoring, and surveillance).
Other activities with potential for synergies include strengthening the referral system, joint training of general health service provider staff, community/home-based care, regular multidisciplinary team clinical meetings, NGO collaboration, joint advocacy and health

information messages etc. It is anticipated that some of these mechanism will overcome the barriers of different programme cultures and focus, lack of resources, increase health worker knowledge and awareness of HIV and TB, in addition to going some way toward reducing stigma.

The potential benefits of TB and HIV/AIDS programme collaboration at national, provincial and district level are many. The sharing of expertise and experience between TB and HIV programmes could dramatically improve patient care. TB patients will continue to benefit from access to interventions for HIV prevention (such as PCT, VCT, condoms, STI treatment), treatment of HIV-related diseases other than TB (such as pneumonia, diarrhoea, chest infections) and treatment of HIV (i.e. with antiretroviral drugs). HIV entry points for TB and vice-versa will improve the level of active case findings.

4.6.3 It is either now or never in promoting collaboration

Current national strategic plan 2012-2016 (NSP) provide a good opportunity to promote TB and HIV/AIDS programme collaboration. The current political leaders have demonstrated strong political will, and have shown that TB and HIV are high on the agenda. The general consensus has been that there was no political will in the past, which contributed immensely to the burden of disease before now. With the reduction of the TB incidence rates, and reduction in the rate of new HIV infections in South Africa in 2011, programme collaboration will optimize the use of scarce resources (both financial and human) in providing a more effective response to HIV-related TB. The mass mobilization of every sector of society remains our only weapon to act decisively.

Chapter 5 Conclusion and Recommendations

Young people have been described as the greatest hope for turning the tide against TB and HIV/AIDS pandemics. This is because they are the "Leaders of Tomorrow" and are the most threatened nationally accounting for half of all new cases. It is pertinent to acknowledge that the future of TB and HIV/AIDS co-morbidity illnesses will be shaped by their actions. The herculean task of establishing the platform lies with us now, to guide them in adopting the right approach.

TB control and HIV care and prevention require the collaboration of many partners. However, evidence of effective collaboration between TB and HIV programmes is still a challenge; few pointers have shown that there is much benefits and positive impacts on both programmes. From the perspective of the study participants, programme collaboration should not only be encouraged, but optimized. This study suggests that TB and HIV /AIDS programmes need to collaborate effectively to deliver an effective, prompt response to HIV – related TB.

Considerations of the barriers to and mechanisms to promote, future collaboration between TB and HIV/AIDS programmes give rise to the following recommendations on how National department of health might promote more effective TB control among HIV-infected people in South Africa.

5.1 At the provincial level, promote TB and HIV/AIDS programme collaboration through:

- Joint development and wide dissemination of a provincial TB/HIV strategic plan (framework);
- To consider the possibility of merging TB and HIV/AIDS directorate as an entity for a more effective, hands-on approach.
- Increased political commitment to HIV-related TB through increased resources, financial and human:
- Promotion of the interdependence of TB and HIV at the senior management level in the provinces and broad representation by TB and HIV leadership at each other's meetings.
- Promotion of good clinical practice and best practices at provincial forums by clinicians on both sides.

5.2 At the district level, promote TB and HIV/AIDS programme collaboration through:

- Promotion of joint district multidisciplinary team meetings on regular basis
- Promotion of joint TB and HIV/AIDS programme reviews
- a strengthened HIV-entry point at TB clinics and TB entry point at HIV/AIDS clinics to reflect comprehensive care

5.3 Increase financial and technical assistance to TB and HIV programmes through;

- coordinated support from the national and provincial department of health (at senior management level);
- provision of ring-fenced resources including conditional grants equally to both programmes
- Uplifting the socio-economic lives of the entire community and addressing psycho-social challenges.
- dialogue with the district managers on funding joint TB/HIV activities within the districts.

5.4 Improve access to TB/HIV information;

- Disseminating evidence based information on weekly routine in the media to leverage support for TB/HIV integrated services. Provincial structures to demonstrate strong united leadership that is lacking on policy and advocacy work.
- HIV focused organizations (including NGOs) to build institutional capacity and understanding on TB.
- To ensure that home based carers attending to HIV-infected clients also attend to TB co-infected clients as well.

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Annexure

Occupational

Age: _____ Gender: _____ Occupation:_____

Part 1

1. **Are you a client in this Clinic?**

   Yes No

2. **Are you currently on TB treatment?**

   Yes No

3. **Did you receive TB treatment in the past?**

   If yes, please provide dates _____

4. **Do you know your status**

   Yes No

5. **When did you get tested?**

   0-6 mths ago 6-12 mths ago 1-2 yrs ago

   2-4 yrs ago 5 yrs ago

6. **Are you on ARVs ?**

   Yes No

7. **Do you feel much better since you started ARVs?**

   Yes No

8. **Would you recommend ARVs for all adults who qualify to use it?**

   Yes No

9. **Do you recommend positive healthy life style for all adults, especially those on ARVs**

   Yes No

10. **Do you suffer from any other illness?**

    Hypertension Diabetes Asthma Epilepsy Psychiatric illness

    Others _____

Part 2

1. How would you rate the quality of TB service at your nearest PHC (Clinic) ?

   Excellent Good Fair Poor

2. Did you receive/ are you receiving health education about TB and the need for TB treatment from the Professional Nurse at your TB facility?

   Yes No

3. How would you rate the quality of Care you receive at the ARV Clinic?

   Excellent Good Fair Poor

4. Did you receive health education and on-going counselling on HIV/AIDS, ARVs and the need for good adherence?

   Yes No

5. Do you recommend that the quality of support and care in the clinic should improve?

   Yes No

6. How do you or did you feel receiving your TB treatment from a different clinic from your ARV clinic?

   Good Bad

7. Would you recommend that TB treatment and ARV treatment should be accessed in the same clinic?

   Yes No

8. If yes, why?

   To save cost To save time To improve care

9. What have been your main challenge attending TB clinic and/ or ARV clinic?

   Transport fare Turn around time Both

PART 3

1. Would you be willing to support awareness campaigns on TB and HIV/AIDS collaboration programme?

   Yes No

   If no, why?